

**UNIVERSITY OF NIGERIA, NSUKKA  
SCHOOL OF POSTGRADUATE STUDIES**

**Doctor of Medicine (MD)**

**&**

**Master of Science (MSc) in Medicine**

**Degrees**

**PROGRAMME FOR DEPARTMENT OF MEDICINE,  
FACULTY OF MEDICAL SCIENCES,  
COLLEGE OF MEDICINE,  
UNIVERSITY OF NIGERIA, ITUKU-OZALLA CAMPUS.**

**2018**

# UNIVERSITY OF NIGERIA, ITUKU - OZALLA CAMPUS

## DEPARTMENT OF MEDICINE

### POSTGRADUATE DEGREE PROGRAMMES IN MEDICINE

#### **Philosophy:**

Since its inception in 1970, the Department of Medicine of the College of Medicine, University of Nigeria, has had the responsibility of training doctors in the area of Internal Medicine. Internal Medicine has increasingly developed various subspecialties including Cardiology, Nephrology, Neurology, Endocrinology, Dermatology, Respiratory Medicine, Gastroenterology, Rheumatology, Infectious Diseases and Clinical Pharmacology/Therapeutics.

The economic and social costs of inadequate, improper and non-research based care of individuals with medical conditions are very considerable. Much of these are due to insufficient education, knowledge and training with respect to disorders of Internal Medicine even at the highest levels of human academic endeavours. As part of its mandate to produce skilled physicians at both the undergraduate and postgraduate levels, the Department has introduced programmes in accordance with best global practices despite the local challenges. Hence the imperative for a suitably designed postgraduate programme to help bridge this gap which the MSc programme is designed to achieve.

A few years ago, the Doctorate of Medicine programme of the Department was approved by the University. The Doctor of Medicine (MD) is a higher academic degree to be awarded by the University of Nigeria in the clinical discipline of Internal Medicine. The degree is awarded on the basis of original research done by a candidate, which displays critical judgment and contains materials publishable as definite contributions to the body of knowledge. The courses are general courses to be taken by candidates irrespective of their area of specialization.

The MD is a research degree taken after a candidate has obtained a specialist clinical qualification such as the Fellowship in Medicine. As an academic degree, the MD ranks higher than the Doctor of Philosophy (PhD). There is a dire need to produce candidates with in-depth knowledge of clinical research in the country. This will serve to improve both research and teaching capabilities in our research centres and teaching hospitals. Recipients of the MD degree will be in a better position to attract research grants. It will also lead to improved quality of clinical care rendered to patients who previously could not be properly treated because of inadequate knowledge and skill. Candidates who have not obtained specialist higher qualifications, in some cases are required to obtain an MSc (Master of Science) degree, before enrolling in the programme. At present there are no such programmes in universities in the South Eastern states of Nigeria. An effective MD programme will provide a viable template for harnessing collaborative programmes in research both locally and internationally.

## **OBJECTIVES:**

### **MD Programme**

A general objective of the MD programme is to produce a researcher with in-depth knowledge of clinical research with a view to enhancing their clinical and research skills as well as opportunities.

More specifically:-

1. The programme is aimed at providing medical graduates, who cannot devote entire periods of time solely to research work, the opportunity of undertaking such research while pursuing their professional careers.
2. At the end of training, each candidate will be equipped with the capacity to formulate and execute research in his or her area of specialization.

### **MSc Programme**

The broad objectives of the MSc programme are to provide students with adequate knowledge, attitudes, values and skills generic to the discipline of Internal Medicine and its subspecialties. The specific aims are:-

1. To establish a profound understanding in the student of the established aetiopathogenesis, pathophysiology, clinical features, molecular genetics, diagnostics and care options of varieties of medical disorders in the relevant specialty and thus research-oriented develop manpower for secondary and tertiary care in order to improve prevention, treatment and psychosocial support for people living with these medical conditions.
2. To derive a deeper appreciation of the peculiar challenges of disorders of Internal Medicine as seen in the tropics with research-oriented modification of established principles to suit the local environment without undermining established treatment endpoints.
3. To provide a greater awareness and capacity for research into peculiar social derivatives those underpins medicine in the tropics and hence provide candidates with requisite tools for patient-oriented clinical research as well as advocacy.
4. To show how research may encourage the more appropriate use of scarce resources (human and material) in the clinical management of medical diseases.

## **SCOPE**

### **MD Programme**

The programme will provide the candidate with information on the current approach to practices and recent advances in both Clinical Medicine and a chosen subspecialty of Internal Medicine.

## **MSc Programme**

This programme suitably conveys knowledge, competencies and skills related to the discipline of Internal Medicine in a structured format to students who desire a richer focus on the subject matter than is currently available in health and educational institutions in the country. It explores evidence based studies beyond the mere science of medicine cutting across the various subspecialties (current and emerging). There is exposure to didactics on the nature and fundamental of Internal Medicine disorders which are delivered in courses spread over four semesters. There is a clinical course component in the 2<sup>nd</sup> year. Research activity and medical statistics are included to enhance capacity, broaden and sharpen the students' focus.

## **ADMISSION REQUIREMENTS**

### **1. MD Programme**

- (i). Possession of the Fellowship in Medicine from the National Postgraduate Medical College or its equivalent.
- (ii). At least an MSc degree in the relevant discipline in which research work predominates, from a recognized University after obtaining the MBBS or its equivalent. The master's degree must be with a GPA of at least 3.50 on the scale of 5 or 3 in a scale of 4 in the relevant medical science.

Note:

Recipients of professional qualifications such as the Fellowship in Medicine undergo a course of lectures in their various professional disciplines as well as general ones including research methodology, epidemiology and statistics during their course of study. They are also required to prepare a Project Report and defend it at an oral examination, before being finally awarded a fellowship.

### **2. MSc Programme**

- (i). Applicants must hold a degree in Medicine (MBBS, MBBCh) from the University of Nigeria or any other recognized university.

## **AREAS OF SPECIALIZATION**

### **MD Programme**

- (i). Cardiology
- (ii). Nephrology
- (iii). Neurology
- (iv). Endocrinology
- (v). Gastroenterology

- (vi). Respiratory Medicine (Pulmonology)
- (vii). Rheumatology
- (viii). Infectious Diseases
- (ix). Clinical Pharmacology/ Therapeutics
- (x). Dermatology

### **MSc Programme**

- (i). Cardiology
- (ii). Nephrology
- (iii). Neurology
- (iv). Endocrinology
- (v). Gastroenterology
- (vi). Respiratory Medicine (Pulmonology)
- (vii). Rheumatology
- (viii). Infectious Diseases
- (ix). Clinical Pharmacology/ Therapeutics
- (x). Dermatology

## **DURATION OF PROGRAMMES**

### **MD Programme**

This is a part- time programme and the duration of the programme leading to award of the degree of the Doctor of Medicine (MD) shall be a minimum of three calendar years and maximum of six calendar years.

### **MSc Programme**

For full- time students the programme will run for a minimum of two (2) years and a maximum of three (3) years. The first year of two semesters will be for lectures. For part- time students, the programme will run for a minimum of three (3) years and a maximum of five (5) years. The first two years will be for lectures. There will be six months and three months respectively for clinic and community work.

## **REQUIREMENTS FOR GRADUATION**

### **MD Programme**

1. To graduate, the MD candidate must take and pass all the requisite courses as prescribed in the MD course list below, a total of 31 units as follows:

Core Courses	19 units
Thesis	12 units

Total **31 units**

2. Every MD candidate must submit a thesis on a chosen and approved topic, supervised by a member of staff whose qualification is not below the Postgraduate Medical College Fellowship (FWACP or FMCP) and/or PhD/MD, and who is not lower than Associate Professor in rank.

The MD thesis must be defended before an external examiner duly nominated for that purpose and appointed by Senate.

### **MSc Programme**

1. To be awarded the MSc degree, a student must have taken and passed the prescribed number of compulsory and required courses from the approved list, a total of 46 units as follows:-

Course work	26 units
Thesis/Project Report	8 units

**Total 34 units**

2. In all cases, the MSc student must write and submit to the Department a Project Report duly supervised by a lecturer in the department whose qualifications are not below the Postgraduate Medical College Fellowship (FWACP or FMCP) and/or MD/Ph.D. Such a Project Report must be sent to an external examiner nominated by the Department and appointed by Senate for that purpose.

### **LIST OF APPROVED SUPERVISORS**

#### **MD Programme**

1. Emeritus Professor JM Oli FWACP FRCP – Internal Medicine/ Endocrinology
2. Professor BJC Onwubere FMCP FWACP Dip Card - Internal Medicine/ Cardiology
3. Professor CK Ijoma FMCP – Internal Medicine/ Nephrology
4. Professor II Ulasi FWACP FRCP – Internal Medicine/ Nephrology
5. Professor SO Ike FMCP – Internal Medicine/ Cardiology
6. Professor BC Anisiuba FMCP – Internal Medicine/ Cardiology

7. Professor SC Nwokediuko FMCP – Internal Medicine/ Gastroenterology
8. Professor IO Onwuekwe MWACP FWACP – Internal Medicine/ Neurology
9. Professor CJ Chukwuka FMCP FACP – Internal Medicine/ Pulmonology
  
10. Professor EB Arodiwe FWACP - Internal Medicine/ Nephrology
11. Professor CP Chijioke MD FRCP FWACP– Clinical Pharmacology/ Therapeutics
12. Associate Professor C Onyedum FWACP FACP - Internal Medicine/  
Pulmonology
13. Associate Professor EC Ejim FMCP FESC - Internal Medicine/ Cardiology
14. Associate Professor CI Okafor FMCP - Internal Medicine/ Endocrinology
15. Associate Professor UN Ijoma FMCP - Internal Medicine/ Gastroenterology

### **MSc Programme**

1. Emeritus Professor JM Oli FWACP FRCP – Internal Medicine/ Endocrinology
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11. Professor CP Chijioke MD FRCP FWACP – Clinical Pharmacology/ Therapeutics
12. Associate Professor C Onyedum FWACP FACP - Internal Medicine/  
Pulmonology
13. Associate Professor EC Ejim FMCP FESC - Internal Medicine/ Cardiology
14. Associate Professor CI Okafor FMCP - Internal Medicine/ Endocrinology
15. Associate Professor UN Ijoma FMCP - Internal Medicine/ Gastroenterology
16. Dr. BM Onyenekwe FMCP – Senior Lecturer/ Internal Medicine/Endocrinology
17. Dr. EE Young FWACP MSc – Senior Lecturer /Internal Medicine/ Endocrinology
18. Dr. OS Ekenze FWACP – Senior Lecturer/Internal Medicine/Neurology
19. Dr. B Ezeala-Adikaibe FWACP – Senior Lecturer/Internal Medicine/Neurology
20. Dr. CB Nwatu FWACP- Senior Lecturer/Internal Medicine/Endocrinology
21. Dr. MI Iroezindu FWACP FMCP - Senior Lecturer /Internal  
Medicine/Endocrinology
22. Dr. OD Onodugo FWACP – Senior Lecturer/Internal Medicine/Nephrology
23. Dr. CL Onyekonwu FMCP MSc – Senior Lecturer/Internal Medicine /Dermatology
24. Dr. UR Ojinmah FMCP – Senior Lecturer/Internal Medicine/Dermatology
25. Dr. CC Okwara FWACP –Senior Lecturer /Internal Medicine/ Rheumatology

## **JOB OPPORTUNITIES**

### **MD Programme**

At the moment there is a dearth of holders of the MD degree in Nigeria. Employment opportunities therefore abound for any of the recipients both nationally and internationally in any of the medical teaching and research centres.

### **MSc Programme**

The programme is appropriate for individuals interested in enriching/ enhancing their careers as private general medical practitioners as well as specialists in Internal Medicine in primary, secondary and tertiary level health care institutions. Successful candidates are better equipped to become leading researchers in chosen specialties. The programme also offers an excellent preparation for students who successfully complete it and who may wish to go on to take a higher degree such as the MD (Doctorate in Medicine) or the PhD.

<b>Stress areas</b>	<b>Stress number</b>
Research methodology/ICT	0
Epidemiology/Statistics/ Introduction	1
Aetiopathogenesis/ Molecular Aspects	2
History Taking	3
Physical Examination	4
Medical Investigations	5
The Diagnostic Formulation	6
Therapeutics and Management	7
Seminar	8
Thesis	9

## DOCTOR OF MEDICINE (MD) – THREE -YEAR PROGRAMME

### Course outline

The following are mandatory courses:-

#### **FIRST YEAR**

##### **First Semester**

<b>Course number</b>	<b>Course title</b>	<b>Units</b>
MED 811	Introduction/Epidemiology/Med Statistics	2
MED 821	Aetiopathogenesis of Disease/Molecular Aspects	2
MED 851	Medical Investigations	2
PGC 701	Research Grant /Synopsis Writing	3
<b>Sub Total of Units = 9</b>		

##### **Second semester**

MED 862	Diagnostic Formulation	2
MED 872	Therapeutics and Management	2
<b>Sub Total of Units = 4</b>		

The candidate is expected to undertake three seminars in the area of specialization.

#### **SECOND YEAR**

##### **First Semester**

MED 883	MD Seminar I	2
<b>Sub Total of Units = 2</b>		

##### **Second semester**

MED 882	MD Seminar II	2
MED 884	MD Seminar III	2
<b>Sub Total of Units = 4</b>		

#### **THIRD YEAR**

MED 890	Thesis	12
<b>Sub Total of Units = 12</b>		

**GRAND TOTAL OF UNITS = 31**

## **COURSE DESCRIPTION FOR THE MD DEGREE PROGRAMME**

### **MED 811 Introduction/Epidemiology / Medical Statistics 2 units**

The course introduces students to the basic principles and concepts of medicine and epidemiology. The determinants and control of human disease as well as principles of disease outbreak investigation, illustrated with case studies. Particular emphasis will be placed on the design, conduct and interpretation of clinical and epidemiological studies, standard statistical concepts of data descriptions, hypothesis testing including test statistics, correlation, p-values, significance levels, confidence levels and linear regression from medical literature. Examples from real data and medical literature will be used extensively.

### **MED 821 Aetiopathogenesis/Molecular Aspects 2units**

In this course, the student is introduced in greater depth to the concept and understanding of disease aetiology and processes contributing to producing morbidity. Various models are discussed and dissected in view of modern applications of molecular medicine. The principle of pathophysiology is built into this course.

### **MED 851 Medical Investigations 2 units**

With the evolution of science and technology and the development of ever increasing arrays of medical investigation modalities, candidates are introduced to the appropriate application of these in the candidate's chosen subspecialty of study. Problems and challenges of medical investigations in resource challenged settings are discussed.

### **PGC 701 Research Grant/Synopsis Writing:**

Identification of types and nature of grant and grant writing; mining of grants application calls on the internet. Determining appropriate strategy for each grant application. Study of various grant application structures and contents and writing of concept notes, detailed project description, budgeting and budget defense. Study of sample grant writings in various forms and writing of mock research and other grants. Identification of University of Nigeria synopsis structure and requirements (Introduction, Methodology and Results). Determining the content of each sub-unit of the synopsis. Steps in writing of synopsis from the Project Report /thesis document. Structural and language issues. Common errors in synopsis writing and strategies for avoiding them. The roles of the student and the supervisor in the production of a synopsis. Writing of mock synopsis. All registered MD students must attend a solution-based interactive workshop to be organized by the School of Postgraduate Studies for a practical demonstration and application of the knowledge acquired from the course, conducted by selected experts.



## MASTER OF SCIENCE IN MEDICINE – TWO/THREE YEAR PROGRAMME

### Course outline

#### FIRST YEAR

##### First Semester

MED 711	Introduction to Medicine	2 units
MED 721	Aetiopathogenesis/Molecular Aspects	2 units
PGC 601	Research Methodology/ICT Appreciation	2 units
MED 731	History Taking	2 units

**Sub Total 8 units**

##### Second Semester

MED 712	Epidemiology/Medical Statistics	2 units
MED 742	Physical Examination	2 units
MED 752	Medical Investigations	2 units
MED 762	Diagnostic Formulation	2 units

**Sub Total 8 units**

#### SECOND YEAR

##### First Semester

MED 771	Therapeutics and Management I	2 units
MED 781	Seminar I	2 units
MED 773	Therapeutics and Management II	2 units
MED 783	Seminar II	2 units

**Sub Total 8 units**

##### Second Semester

MED 782	Seminar III (Clinical Work)	3 units
MED 792	Project	8 units

**Sub Total 10 units**

**GRAND TOTAL OF UNITS = 34 units**

## **COURSE DESCRIPTION FOR THE MASTERS (MSc) DEGREE PROGRAMME**

### **MED 711 Introduction/ Epidemiology / Medical Statistics I 2 units**

The course introduces students to the basic principles and concepts of Clinical Medicine. It revises and reinforces the underlying approach to the medical subspecialties and well as the cardinal manifestation of diseases in these subspecialties. The determinants and control of human disease as well as principles of disease outbreak investigation, illustrated with case studies.

### **MED 721 Aetiopathogenesis in Medicine 2 units**

In this course, the student is introduced in greater depth to the concept and understanding of disease aetiology and processes contributing to producing morbidity. Various models are discussed and dissected in view of modern applications of molecular medicine. The principle of pathophysiology is built into this course.

### **PGC 601 Research methodology/ICT application 2 units**

In-depth research work aimed at acquiring full knowledge and presentations in scholarly writing of the concepts, issues, trends in the definition and development of the study area from African and Western perspectives. Major steps in research; selection of the research problem, literature review, design, data collection, analysis and interpretation, conclusions. Study of various research designs, historical, case studies, surveys, descriptive, cross sectional, experimental etc. Analyses, surveys and synthesis of conceptual and philosophical foundations of different disciplines. Identification of research problems and development of research questions and/or hypotheses. Detailed treatment of methods of collecting relevant research data and the format for presenting research results (from designing the table of contents to referencing, bibliography and appendix). Data analysis and result presentation in different disciplines using appropriate analytical tools.

Methods of project/ Project Report writing. Application of appropriate ICT tools relevant in every discipline for data gathering, analysis and result presentation. Essentials of spreadsheets, internet technology, internet search engines, statistical packages, precision and accuracy of estimates, principle of scientific research, concept of hypothesis formulation and testing, organisation of research and report writing. All registered MSc Degree students must attend a solution-based interactive workshop to be organized by the School of Postgraduate Studies for a practical demonstration and application of the knowledge acquired from the course, conducted by selected experts.

### **MED 731 History Taking 2 units**

Here the candidates are taken through a systematic approach to the method and practice of history taking which is the clinical interrogation of individuals presenting with medical illness. It encompasses didactic and demonstrative sessions. The candidate is

expected to modify and history taking as may be appropriate in peculiar clinical circumstances.

**MED 712 Introduction/ Epidemiology / Medical Statistics II 2 units**

In this second component of the course, further emphasis will be placed on the design, conduct and interpretation of clinical and epidemiological studies, standard statistical concepts of data descriptions, hypothesis testing including test statistics, correlation, p-values, significance levels, confidence levels and linear regression from medical literature. Examples from real data and medical literature will be used extensively.

**MED 742 Physical Examination in Medicine 2 units**

This course is designed to build on the knowledge derived from the history taking process which is the medical clerkship. The systemic approach to the physical examination of the patient with medical illness is explored and demonstrated. Models are constructed to highlight instances. The concept of clinical differential diagnoses based on physical examination findings is discussed. There will be emphasis on eliciting and understanding physical signs of particular relevance to the specialty and subspecialty of the candidate.

**MED 751 Medical Investigations 2 units**

With the evolution of science and technology and the development of ever increasing arrays of medical investigation modalities, candidates are introduced to the appropriate application of these in the candidate's chosen subspecialty of study. Problems and challenges of medical investigations in resource deprived settings are discussed.

**MED 762 Diagnostic Formulation 2 units**

In this course, candidates are taken through the intricate but systematic algorithms of formulating diagnoses be it clinical, pathological, radiological or differential diagnosis. The expectation is that the student will imbibe an analytical problem solving approach to reaching a diagnostic conclusion.

**MED 771 Therapeutics and Management I 2 units**

The candidates in the course are taught the chemotherapeutic principles guiding safe and effective use of pharmacological agents in treating medical conditions in the chosen subspecialties of Nephrology, Cardiology, Neurology, Gastroenterology and Rheumatology. The concepts of the relevant drug monitoring and drug measurement are discussed in detail.

**MED 773 Therapeutics and Management II 2 units**

In this second part of the course, the candidates are further taken into the therapeutic principles guiding safe and effective use of pharmacological agents in treating medical conditions in the fields of Infectious Diseases, Dermatology, Pulmonology and Endocrinology. The concepts of the relevant drug monitoring and drug measurement are discussed in detail. Non-pharmacological therapeutic options are to be considered, as appropriate to the specialty area of the candidate.

**Seminars**

The MSc candidate is expected to present two seminars, domiciled in the area of specialization, before the final examination. Invitations to these seminars should be disseminated faculty-wide and beyond to other relevant departments in the College of Medicine and in the University.

**MED 781 MSc Seminar I 2 units**

A detailed written presentation of the candidate's MSc topic proposal, to include introduction, the research problems, aims and objectives, study area, theoretical framework, literature review and research methodology.

**MED 783 MSc Seminar II 3 units**

A written presentation based on the candidates experience during clinical work in the respective outpatient clinic of the intended area of specialization domiciled at the University of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu. This clinical work should be for a minimum of one-hour /weekly for three (3) months and duly attested to by the clinic consultant/ supervisor.

**MED 792 Project 8 units**

Students are required to conduct a comprehensive research on a problem topic that should be classified in this stress area. Their research report should follow a specified documentation pattern. Under the guidance of one or two assigned supervisors, each student is expected to have earlier (post MED 781), written a formal research protocol, to have presented the protocol to his/her peers and revised it based on feedback. After obtaining ethical approval, the student will perform the study as per the protocol and write up a Project Report which will be defended in the second semester of the second year (for full time students) or the third (for part-time students).